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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,038	09/28/2001	Erwin B. Bellers	US010583	4573
65913	7590	07/17/2007		
NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER TRAN, TRANG U	
			ART UNIT 2622	PAPER NUMBER
			NOTIFICATION DATE 07/17/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

<b>Office Action Summary</b>	<b>Application No.</b> 09/966,038	<b>Applicant(s)</b> BELLERS	
	<b>Examiner</b> Trang U. Tran	<b>Art Unit</b> 2622	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-9,11,13-16,18 and 20 is/are rejected.
- 7) ☒ Claim(s) 3, 5, 10, 12, 17 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed May 22, 2007 have been fully considered but they are not persuasive.

In re page 9, applicant argues that claims have been amended to recite that the variable sample rate is adjustable both upward and downward and no such feature is taught or suggested in Page.

In response, the examiner respectfully disagrees. Page discloses in col. 2, lines 61-68 that "Resampler 17 samples up to a maximum sample rate equal to that used by the ADC 13, or at a significantly lower rate for low bandwidth signals. For application in a waveform recorder, the sampling rates could differ by a factor of 64, e.g., with the high sampling rate on the order of 20 MHz and the low sampling rate on the order of 3 MHz. The sampling frequency of resampler 17 is controlled by a controller 21, which in turn receives signal bandwidth information from the bandwidth analyzer 22". From the above passage, it is clear that the resampler 17 of Page adjust the sample rate both upward and downward as amended.

In re page 10, applicant argues that the rejection of claims 15-20 under 35 USC 101 as being directed to non-statutory subject matter because independent claim 15 does not recite a mathematical algorithm either directly or implicitly.

In response, the argument is found to be persuasive and; therefore, the rejection of claims 15-20 under 35 USC 101 is herein withdrawn.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 4, 7-9, 11, 14-16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipate by Page (US Patent No. 4,755,795).

In considering of claim 1, Page discloses all the claimed subject matter, note 1) the claimed an input receiving an analog video signal is met by the analog input signal (Fig. 1, col. 2, lines 41-53), 2) the claimed a sampling mechanism coupled to the input and sampling the analog video signal utilizing a variable sampling rate modulated for segments of the analog video signal based upon spatial frequencies within the image content contained within the analog video signal is met by the analog-to-digital converter 13, the bandwidth analyzer 22 which analyzes the frequency content of an input signal (Fig. 1, col. 1, lines 61-68 and col. 2, line 41 to col. 6, line 21), 3) the claimed an output of said sampling mechanism being coupled to a signal analysis unit to determine a highest spatial frequency within the image content is met by the bandwidth analyzer 22 which analyzes the frequency content of an input signal and the sampling rate was adjusted as a function of the highest frequency component of the input signal (Fig. 1, col. 1, lines 61-68 and col. 2, line 41 to col. 3, line 52), and 4) the claimed said variable sampling rate being adjustable both upward and downward over a continuous range as a function of the highest spatial frequency within the image content

the analyzer 23 and the controller 21 which selects the sampling rates for resampler 17 according to the input data stream bandwidth (Fig. 1, col. 1, lines 61-68 and col. 2, line 41 to col. 6, line 21).

In considering claim 2, the claimed wherein first sampling rate is employed for a first segment of the analog video signal containing content having a first highest spatial frequency and a second sampling rate greater than the first sampling rate employed segment of the analog video signal containing content having a second highest spatial frequency greater than the first highest spatial frequency is met by the analyzer 23 and the controller 21 which selects the sampling rates (high or low) for resampler 17 according to the input data stream bandwidth (Fig. 1, col. 1, lines 61-68 and col. 2, line 41 to col. 6, line 21).

In considering claim 4, Page discloses all the claimed subject matter, note 1) the claimed wherein the sampling mechanism further comprises: a single analog-to-digital converter receiving the analog video signal and sampling the analog video signal at a fixed rate is met by the analog-to-digital converter 13 (Fig. 1, col. 1, lines 61-68 and col. 2, line 41 to col. 6, line 21), 2) the claimed signal analysis unit analyzing samples from the converter to select sampling rate for and each segment of the analog video signal is met by the bandwidth analyzer 22 which analyzes the frequency content of an input signal and selects the sampling rate for resampler 17 (Fig. 1, col. 1, lines 61-68 and col. 2, line 41 to col. 6, line 21), and 3) the claimed a downsampling unit retaining samples from the converter for each segment of the analog video signal based upon

corresponding sampling rate selected by the signal analysis unit is met by the resampler 17 (Fig. 1, col. 1, lines 61-68 and col. 2, line 41 to col. 6, line 21).

In considering claim 7, the claimed wherein the sampling mechanism samples the analog video signal at a first rate and transmits samples for at least one segment of the analog video signal at second rate different than the first rate is met by the ADC 13 and resampler 17 (Fig. 1, col. 2, line 41 to col. 3, line 52).

Claim 8 is rejected for the same reason as discussed in claim 1 and further the claimed an output transmitting a digital video signal to a display, a storage system, or another device is met by the memory 15 (Fig. 1, col. 2, lines 42-60).

Claim 9 is rejected for the same reason as discussed in claim 2.

Claim 11 is rejected for the same reason as discussed in claim 4.

Claim 14 is rejected for the same reason as discussed in claim 7.

In considering claim 15, Page discloses all the claimed subject matter, note 1) the claimed an input receiving an analog video signal is met by the analog input signal (Fig. 1, col. 2, lines 41-53), and 2) the claimed a sampling the analog video signal utilizing variable sampling rate modulated for segments of the analog video signal based upon spatial frequencies within the image content contained within the analog video signal is met by the analog-to-digital converter 13, the bandwidth analyzer 22 which analyzes the frequency content of an input signal (Fig. 1, col. 1, lines 61-68 and col. 2, line 41 to col. 6, line 21), 3) the claimed determining a highest spatial frequency within the image content is met by the bandwidth analyzer 22 which analyzes the frequency content of an input signal and the sampling rate was adjusted as a function of

the highest frequency component of the input signal (Fig. 1, col. 1, lines 61-68 and col. 2, line 41 to col. 3, line 52), and 4) the claimed adjusting the variable sampling rate both upward and downward over a continuous range as a function of a highest spatial frequency within the image content is met by the analyzer 23 and the controller 21 which selects the sampling rates for resampler 17 according to the input data stream bandwidth (Fig. 1, col. 1, lines 61-68 and col. 2, line 41 to col. 6, line 21).

Claim 16 is rejected for the same reason as discussed in claim 2.

Claim 18 is rejected for the same reason as discussed in claim 4.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Page (US Patent No. 4,755,795).

In considering claim 6, page disclose all the limitations of the instant invention as discussed in claims 1 and 2, except for providing the claimed wherein the rate for each segment of the analog video signal sampling is at least twice a highest spatial frequency within content contained by the corresponding segment of the analog video signal. The capability of selecting the rate for each segment of the analog video signal sampling is at least twice a highest spatial frequency within content contained by the corresponding segment of the analog video signal is old and well known in the art. Therefore, the

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Official Notice is taken. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the old and well known of selecting the rate for each segment of the analog video signal sampling is at least twice a highest spatial frequency within content contained by the corresponding segment of the analog video signal into Page's system in order to increase the quality of the video signal because sampling the video signal using at least twice a highest spatial frequency will reduce interference.

Claim 13 is rejected for the same reason as discussed in claim 6.

Claim 20 is rejected for the same reason as discussed in claim 6.

#### ***Allowable Subject Matter***

6. Claims 3, 5, 10, 12, 17 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The dependent claims 3, 10 and 17 identifies the uniquely distinct features: "a plurality of analog-to-digital converters each coupled to one of the plurality of analog filters and having settings based upon the corresponding analog filter, each analog-to-digital converter sampling an output of the corresponding analog filter; and combination logic selecting the output of one of the analog-to-digital converters for each segment of the analog video signal and combining the selected outputs". The closest prior art, E. C. Cherry et al. (US Patent No. 3,324,237), either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.



The dependent claims 5, 12 and 19 identifies the uniquely distinct features: "wherein the sampling mechanism further comprises: a second analog-to-digital converter receiving the analog video signal and sampling the analog video signal at a variable rate; and a signal analysis unit analyzing samples from the first converter to select a sampling rate for each segment the analog video signal and adjusting the sampling rate of the second converter". The closest prior art, E. C. Cherry et al. (US Patent No. 3,324,237), either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang U. Tran whose telephone number is (571) 272-7358. The examiner can normally be reached on 8:00 AM - 5:30 PM, Monday to Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

July 8, 2007



Trang U. Tran  
Primary Examiner  
Art Unit 2622